

REMARKS

Claims 1-22 are pending in the application, with claims 1-10, 12 and 19 having been withdrawn from consideration.

Claims 11, 13, 14, 15, 16 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the Applicants regard as their invention. It is believed that this Amendment is fully responsive to the Office Action dated **January 24, 2003**.

Objections to the Drawings

The Examiner has objected to Figures 1-24.

More specifically, in item 5 of the office action the Examiner asserts that figures 24 (a) and 9 (b) should be labeled prior art. Figures 24 (a) and 24 (b) have been amended so that they are labeled as prior art. Further, the Examiner's assertion regarding figure 9 (b) is respectfully traversed since this is an apparent typographical error in the office action.

In item 6 of the office action, the Examiner asserts that reference number "111", as shown in figures 12 and 13, is not described in the specification. Page 15, line 12 of the specification has been amended to indicate that the CCD is reference number 111.

Further, in item 6 of the office action, the Examiner asserts that reference "L' " as shown in figure 19 (b) is not discussed in the specification. Page 18, line 22 of the specification has been amended to provide support for reference L'.

Further, in item 7 of the office action, the Examiner asserts that concave positioning grooves (14), images (123), support bar (132), and mirror surfaces (131b) are not shown in any figures. In the attached request for approval of drawing corrections, figures 3, 12 and 13 have been amended to indicate the location of reference numbers 14, 131b, and 132. Entry of these drawing corrections is respectfully requested.

Further, in item 8 of the office action, the Examiner asserts that the means of light emission and the reception having polarizing plates as recited in Claims 14 and 17 are not shown in any figures. Claim 14 has been amended to overcome this rejection. Further, claim 17 has been canceled.

Therefore, withdrawal of the objection to figures 1-24 is respectfully requested.

Claim Rejections under 35 USC §112

Claims 11, 13-14, 16 and (17, 18, 20)/(11, 13, 14, 16) are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Taking the Examiner's comments into consideration, claims 11, 14-16 have been amended to overcome this rejection. Therefore, withdrawal of the rejection of Claims 11, 13-14, 16 and (17, 18, 20)/(11, 13, 14, 16) under 35 USC §112, second paragraph, is respectfully requested.

Double Patenting Rejection

Claim 20 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 11. It should be noted that claim 11 has been amended to delete the term "rectangular." Therefore, this rejection is overcome by this Amendment. Therefore, withdrawal of the objection to Claim 20 under 37 CFR § 1.75 is respectfully requested.

Claim 17 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 14. In light of the cancellation of claim 17, this rejection has been rendered moot. Therefore, withdrawal of the objection to claim 17 under 37 CFR § 1.75 is respectfully requested.

Claim Rejections under 35 USC §102

Claims 11, 15 and (18,20)/(11,15) are rejected under 35 USC §102(b) as being anticipated by Larimore (U.S. Patent No. 2,102,274).

Larimore describes a handheld microscope having a wedge shaped mirror (30) using a light bulb (60) to illuminate an object using the wedge shaped mirror (30).

The present invention is a handheld microscope, as illustrated in figure 2, having a wedge shaped sheet-like mirror (11) to which a support bar (12) is attached. The hand piece (20) has a cut-out groove (21) that accommodates the support bar (12). The sheet-like mirror (11) maybe rectangular shaped or wedge shaped.

As illustrated in the figure of the attached appendix and figures 9-13 and 17 of the present application, the light reception bore for image 27, 116 and the straight-through bore 28, 121 are aligned in a row in the horizontal direction perpendicular to the depth of the sheet-like mirror 11,

131. This alignment of the light reception bore and the straight-through bore allows the sheet-like mirror to be extremely thin.

Thus, under the present invention, as figure 17 shows, it is possible that a target object A that is located in an extremely narrow position can be examined.

As opposed to this, the two bores (bore of socket 11 and bore 14) of Larimore are, as shown in figures 2 and 4 of Larimore, aligned in the direction of the depths of member 30, which makes member 30 thick.

For this reason, the member 30 is not suitable for examination of an extremely narrow position such as in figure 17 of the present application. Moreover, as can be understood from its subject, Larimore relates to pathological research, which is different from the subject of the present application.

Therefore, Larimore does not disclose or suggest the light reception bore for image 27, 116 and the straight-through bore 28, 121 are aligned in a row in the horizontal direction perpendicular to the depths of the sheet-like mirror 11.

Specifically, independent Claims 11, and 13-16 patentably distinguish over the prior art relied upon by reciting, as exemplified by claim 11,

"A microscope comprised of: a means of light emission and reception, comprised of a straight-through bore having a built-in source of illuminating light, and a light reception bore for image light separately; a thin sheet-like mirror, arranged in a closed and adjacent manner with the straight-through bore and the light reception bore of the means of light emission and reception, wherein a mirror surface is formed at an acute angle at the tip thereof, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge; said thin sheet-like mirror navigates illuminating light so as to reflect at said mirror surface, and irradiate the light and a thus reflected and returned image light can be navigated and condensed by making a

reflection at said mirror surface, wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror.

Therefore, withdrawal of the rejection of Claims 11, 15 and (18,20)/(11,15) under 35 USC §102(b) as being anticipated by Larimore (U.S. Patent No. 2,102,274) is respectfully requested.

Claims 16 and 20/16 are rejected under 35 USC §102(b) as being anticipated by Kohayakawa et al. (U.S. Patent No. 4,830,483).

Kohayakawa et al. is a laser treatment apparatus in which an object may be viewed and light transmitted to that object using a mirror.

Kohayakawa et al. does not disclose or suggest the light reception bore for image 27, 116 and the straight-through bore 28, 121 are aligned in a row in the horizontal direction perpendicular to the depths of the sheet-like mirror 11.

Specifically, independent Claim 16 patentably distinguish over the prior art relied upon by reciting,

"A microscope comprised of: a means of light emission and reception for illuminating light and image light comprised of a straight-through bore having a built-in source of illuminating light, and a light reception bore for image light separately; a thin sheet-like mirror arranged in the means of light emission and reception; and a mirror surface formed at the tip of the thin sheet-like mirror at an acute angle, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge, wherein said mirror has a half mirror at a base side surface, wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror."
(Emphasis Added)

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Therefore, withdrawal of the rejection of Claims 16 and 20/16 under 35 USC §102(b) as being anticipated by Kohayakawa et al. (U.S. Patent No. 4,830,483) is respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, claims 11, 13, 14, 15, 16, as amended, are in condition for allowance, which action, at an early date, is requested.

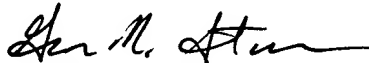
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made
Request for Approval of Drawing Corrections w/Figs. 2, 12, 13 and 24
marked in red ink

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VERSION WITH MARKINGS TO SHOW CHANGES MADE 09/582,094

IN THE DRAWINGS:

Figs. 3, 12, 13 and 24 have been amended as indicated in the attached Request for Approval of Drawing Changes.

IN THE SPECIFICATION:

Page 15, fourth complete paragraph, has been amended as indicated below:

This charge-coupled device-type video microscope 100 is comprised of: an optical system 114 that appropriately combines a charge-coupled device (CCD) 111 and a plurality of lenses 113; a focus adjustment mechanism 115 that adjusts the focus of the optical system; a printed board for source light 118, having a light reception bore 116 arranged in a predetermined location with the light axes corresponding to the optical system 114, and materials for illuminating light source 117, such as light emitting diodes; a resinous material 120, having straight-through bores for elimination 121 and 121, to which the light emitting diodes mounted on the printed board are to be inserted and light reception bore 116 [for images 123]; and a hand piece 112 of the hand-help type, having been built-in resinous material 120 and a thin sheet-like mirror unit 130 attached thereto.

Page 18, fourth complete paragraph, has been amended as indicated below:

Incidentally, Figure 19 (b), as a comparison example, shows an arrangement relationship between a non-convergent (straight-shaped) sheet-like mirror M' and the target object A. The

distance L' between the exit of the illuminating light and the target object A is longer than the distance L.

IN THE CLAIMS:

Please amend the claims as follows:

11. (Amended) A microscope comprised of:

a means of light emission and reception, comprised of a straight-through bore having a built-in source of illuminating light, and a light reception bore for image light separately; [and]

a [rectangular] thin sheet-like mirror, arranged in a closed and adjacent manner with the straight-through bore and the light reception bore of [this] the means of light emission and reception, wherein [the] a mirror surface is formed at an acute angle at the tip thereof, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge;

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[the] said thin sheet-like mirror navigates illuminating light so as to reflect at [the] said mirror surface, and irradiate the light and [the] a thus reflected and returned image light can be navigated and condensed by making a reflection at [the] said mirror surface,

wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror.

13. (Amended) A microscope comprised of: a means of light emission and reception, comprised of a straight-through bore having a built-in source of illuminating light, and a light

reception bore for image light separately; and a thin sheet-like mirror, arranged in a closed and adjacent manner with the straight-through bore and the light reception bore of [this] the means of light emission and reception, wherein [the] a mirror surface is formed at an acute angle at the tip thereof, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge,

[the] said thin sheet-like mirror has a half mirror at [the] a baseside surface, which takes in

[the] said illuminating light and irradiates [the] said image light,

[the] said thin sheet-like mirror reflects the illuminating light at [the] said half mirror, navigates, and reflects at [the] said mirror surface to irradiate the light; [the] a thus reflected and returned image light can be reflected at [the] said mirror surface, and navigated to get the light condensed,

wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror.

14. (Amended) A microscope comprised of: a means of light emission and reception, comprised of a straight-through bore having a built-in source of illuminating light, and a light reception bore for image light separately; and a thin sheet-like mirror, arranged in a closed and

adjacent manner with the straight-through bore and the light reception bore of [this] the means of light emission and reception, wherein [the] a mirror surface is formed at an acute angle at the tip thereof, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge,

[the] said thin sheet-like mirror has a half mirror at [the] a baseside surface, which takes in [the] said illuminating light and irradiates [the] said image light[, wherein the said straight-through

bore and the said light reception bore have polarizing plates whose polarization angles differ each other],

[the] said thin sheet-like mirror reflects the polarized illuminating light at [the] said half mirror to navigate and irradiate the light; and [the] a thus reflected and returned image light can be reflected at [the] said mirror surface and navigated to get the polarized light condensed,

wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror.

15. (Amended) A microscope comprised of: a means of light emission and reception for illuminating light and image light comprised of a straight-through bore having a built-in source of illuminating light, and a light reception bore for image light separately;

a thin sheet-like mirror arranged in [this] the means of light emission and reception; and a mirror surface formed at the tip of [this] the thin sheet-like mirror at an acute angle, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge,

wherein [the] said mirror is the separate type in accordance with the means of light emission and reception,

wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror.

16. (Amended) A microscope comprised of: a means of light emission and reception for illuminating light and image light comprised of a straight-through bore having a built-in source of

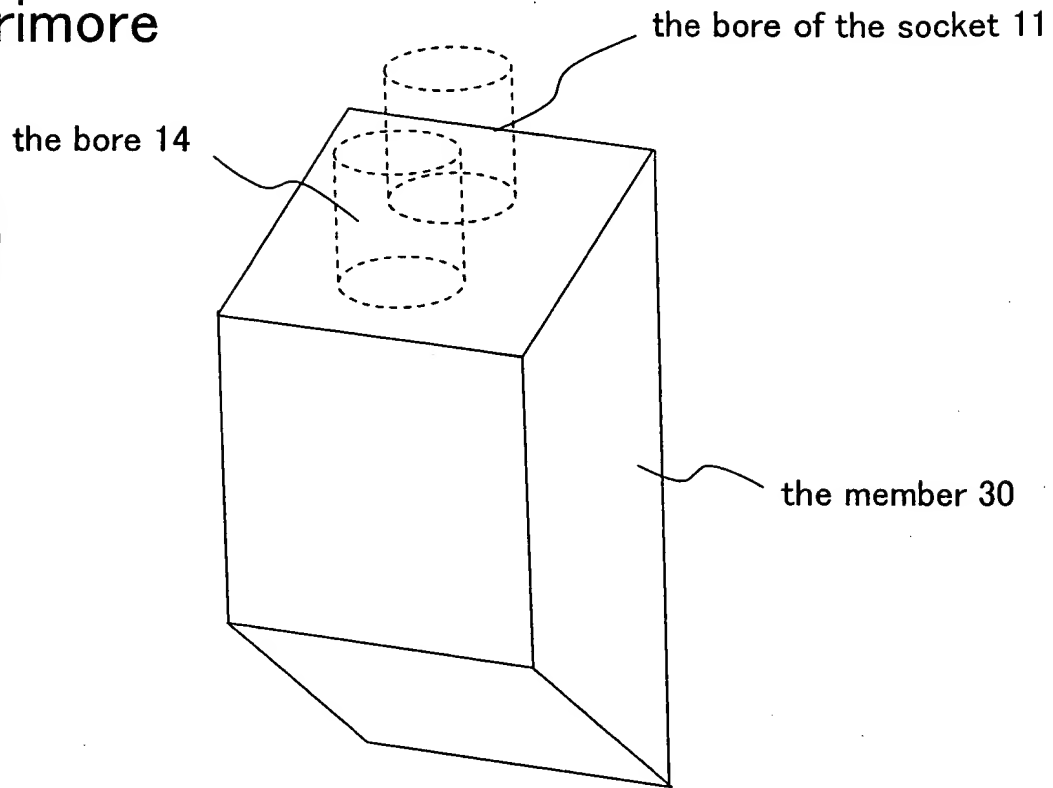
illuminating light, and a light reception bore for image light separately; a thin sheet-like mirror arranged in [this] the means of light emission and reception; and a mirror surface formed at the tip of [this] the thin sheet-like mirror at an acute angle, wherein the thin sheet-like mirror narrows in width on two sides to form a wedge,

wherein [the] said mirror has a half mirror at [the] a base side surface,

wherein said light reception bore for the image and the straight-through bore are aligned in a row in a horizontal direction perpendicular to the depth of the thin sheet-like mirror.

APPENDIX

Larimore



Present Application

